

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016570**Date Inspected:** 26-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Li Jia / Mr. Tian Lei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder( OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

BAY- 1

Visual Testing (VT)

This QA performed Random VT of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. The members are identified as OBG Cross beam CB15 weld Components attached to the Floor beam diaphragms. This QA found some undercut, arc strikes and under sized welds during inspection, all areas marked and informed to ZPMC QC Certified Welding Inspector (CWI) for further action.

BAY- 2

This QA Inspector Randomly observed the following work in progress:

ZPMC UT Technicians performing Ultrasonic Testing on Floor beam welds located on FB3317-001 and FB3321. Refer the attached photos for reference.

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BAY- 6

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06487.

### Ultrasonic Testing (UT)

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Cross beam CB18 Diaphragm weld Components. Total number of welds UT Tested: 08 No's. The weld designations are review as follows:

1. SA3075-001-001,017
2. SA3075-002-001,017
3. SA3076-003-001,017
4. SA3076-004-001,017

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06492.

### Magnetic Particle Testing (MT)

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated MT report for this date. The members are identified as OBG Cross beam CB18 Diaphragm weld Components. Total number of welds MT Tested: 08 No's. The weld designations are review as follows:

1. SA3075-001-001,017
2. SA3075-002-001,017
3. SA3076-003-001,017
4. SA3076-004-001,017

Flux Cored Arc Welding (FCAW) of weld joint FB3168-001-016. Welder is identified as 053609. ZPMC Quality Control (QC) is identified as Mr. Li Jia. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC-U4b-F.

FCAW of weld joint FB3168-004-016. Welder is identified as 217185. ZPMC Quality Control (QC) is identified as Mr. Li Jia. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC-U4b-F.

BAY- 7

FCAW of weld joint SP3177B-001-096,097. Welder is identified as 204342. ZPMC Quality Control (QC) is identified as Mr. Guopan. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

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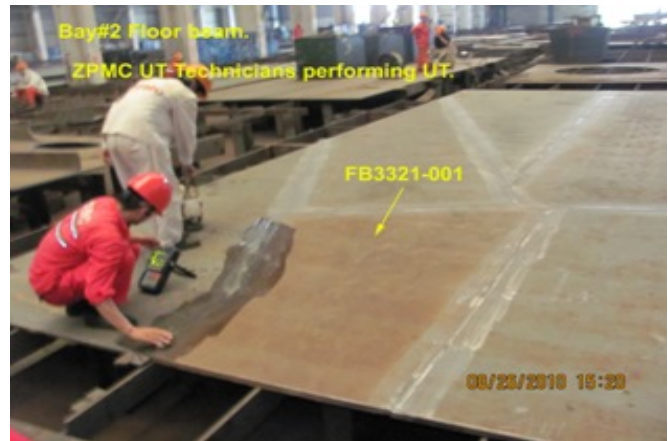
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FCAW of weld joint SP3177B-001-102,103. Welder is identified as 051246. ZPMC Quality Control (QC) is identified as Mr. Guopan. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

FCAW of weld joint SP3177B-001-062,063. Welder is identified as 053742. ZPMC Quality Control (QC) is identified as Mr. Guopan. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Prabhu,Surendra

Quality Assurance Inspector

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**Reviewed By:** Hall,Steven

QA Reviewer